

WARM-UP    (Work alone for now)

$$4 \div 4 \times 2$$

I get two answers: 2 and  $\frac{1}{2}$   
which one is the right answer?

P  
E  
M  
D  
A  
S

(EMDAS

Feeling more comfortable with Math

Please sir, can I have more fun?

Not getting left behind

-Word Problems/Creating Equations

Real World

HW: Given for the whole week. Turning in Late.

Extra Help

Bored/Too Easy

Goals: 1) To solve and graph inequalities  
2) " " " " compound inequalities  
3) \* intro to absolute values

equation =  
inequality  $\{, >, \leq, \geq$

When solving an inequality there's  
1 catch:

If you  $\times$  or  $\div$  both sides  
by a negative, the inequality  
symbol will flip. ( $< \rightarrow >$ )

Ex:

$$3x - 12 < 3$$

$$\begin{array}{ccc} & +12 & +12 \\ \frac{3x}{3} & < & \frac{15}{3} \end{array}$$


$$x < 5$$



$$6 + 5(2-x) \leq 41$$

Solve for x & graph

$$6 + 10 - 5x \leq 41$$

$$\begin{array}{rcl}
 -6 & -5 & -4 & 16 & -5x \leq 41 \\
 & & & \text{--16} & \\
 \hline
 & & & -5x \leq 25 \\
 & & & \text{--5} & \\
 & & & x \geq -5
 \end{array}$$


# Solve & Graph

$$2x - 3 > 2(x - 5)$$

$$2x - 3 > 2x - 10$$

$+3$ 
 $+3$



All numbers

All real numbers

$$2x > 2x - 7$$

$-2x$ 
 $-2x$

$$0 > -7$$

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$$\emptyset < -7$$

# Compound Inequalities

$$3x - 1 > -28 \quad \text{and} \quad 2x + 7 < 19$$

$\begin{array}{cc} +1 & +1 \\ \hline \end{array}$ 
 $\begin{array}{cc} -7 & -7 \\ \hline \end{array}$

$$\frac{3x}{3} > \frac{-27}{3} \quad \text{and} \quad \frac{2x}{2} < \frac{12}{2}$$



$$x > -9 \quad \text{and} \quad x < 6$$

$$\underline{-9 < x < 6}$$

Ex:  $4y - 2 \geq 14$  or  $3y - 4 \leq -13$

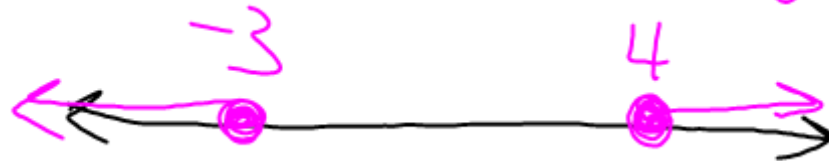
Solve & Graph

$$4y - 2 \geq 14 \quad \text{or} \quad 3y - 4 \leq -13$$

+2      +2                      +4      +4

$$\frac{4y}{4} \geq \frac{16}{4} \quad \text{or} \quad \frac{3y}{3} \leq \frac{-9}{3}$$

$$y \geq 4 \quad \text{or} \quad y \leq -3$$





$$\frac{2x}{2} > \frac{-10}{2} \text{ and } \frac{9x}{9} < \frac{18}{9}$$

$$x > -5 \text{ and } x < 2$$

$$\underline{-5 < x < 2}$$



HW: 1.4, p.29: 1-9(odd), 17-21(odd)  
48, 49

17-22 (odd)

~~35, 50~~

31, 35, 52

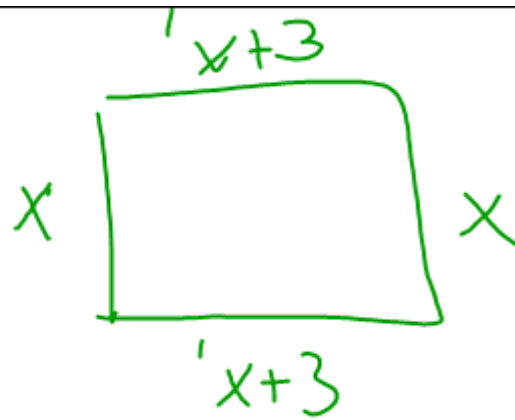
$$\textcircled{17} \quad \frac{A}{b} = \frac{1}{2} \frac{b}{b} h, \text{ solve for } h$$

$$\frac{\frac{A}{b}}{\frac{1}{2}} = \frac{\frac{1}{2} h}{\frac{1}{2}} \Rightarrow \frac{\frac{A}{b}}{\frac{1}{2}} = h$$

$$\frac{A}{b} \cdot 2 = h$$

$$h = \frac{2A}{b}$$

(31)



$$\text{Perimeter} = 24$$

$$x+3 + x+3 + x + x$$

$$4x+6 = 24$$

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35

a

$$\begin{array}{ccc} \text{1st} & \text{2nd} & \text{3rd} \\ x + (x+1) + (x+2) = 90 \end{array}$$

$$3x + 3 = 90$$

$$\begin{array}{r} 3x = 87 \\ \hline 3 \end{array}$$

b

$$\begin{array}{ccc} \text{1st} & \text{2nd} & \text{3rd} \\ (x-1) + x + (x+1) = 90 \end{array}$$

$2^{\text{nd}} = 29 = 1^{\text{st}} \text{ integer}$

$$3x = 90 \quad 2^{\text{nd}} = 30$$

$$\begin{array}{ll} \$2000 & \text{CD} \Rightarrow 2000(0.06) \\ & = 120 \\ \$3000 & \text{Bonds} \rightarrow \underline{2120}(0.06) \\ & \rightarrow 3000(0.08) \\ & = 240 \\ & 3240 \end{array}$$